

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) A method of aligning the printing of dots generated by different nozzle banks of an inkjet printer apparatus comprising the steps of:
 - (a) printing on a receiver medium a sequence of spaced discrete first dots from one nozzle bank having plural nozzles associated therewith;
 - (b) printing on a receiver medium a sequence of spaced discrete second dots from a second nozzle bank having plural nozzles associated therewith, the second dots being spaced from the first dots and at least some of the second dots being located at distances closer to at least some of the first dots than the respective nozzle spacings between nozzles on the second nozzle bank which emitted the at least some of the second dots and the nozzles on the first nozzle bank that emitted the at least some of the first dots;
 - (c) determining a placement error for the at least some of the second dots; and
 - (d) adjusting alignment of the second nozzle bank in accordance with any errors determined in placement.
2. (Currently Amended) The method of ~~claim 1~~ claim 40 and wherein the first and second nozzle banks print different color inks.
3. (Currently Amended) The method of ~~claim 1~~ claim 40 and wherein the first and second nozzle banks print the same color ink.

Claims 4-5 (Cancel)

6. (Currently Amended) The method of ~~claim 1~~ claim 40 including digitizing an image of the dots using a digital camera.
7. (Currently Amended) The method of ~~claim 1~~ claim 40 and wherein the first and second nozzle banks move in order to provide dots at different locations

on the receiver medium and some of the first and second dots are printed during different passes.

Claims 8-9 (Cancel)

10. (Currently Amended) The method of ~~claim 7~~ claim 40 and wherein at least one of the first and second nozzle banks prints ink of different drop sizes.

Claims 11-13 (Cancel)

14. (Previously Presented) A method of aligning the printing of dots generated by different nozzle banks of an inkjet printer apparatus comprising the steps of:

(a) printing on a receiver medium a sequence of spaced discrete first dots from one nozzle bank having plural nozzles associated therewith;

(b) printing on a receiver medium a sequence of spaced discrete second dots from a second nozzle bank having plural nozzles associated therewith, the second dots being spaced from the first dots and at least some of the second dots being located at distances closer to at least some of the first dots than the respective nozzle spacings between nozzles on the second nozzle bank which emitted the at least some of the second dots and the nozzles on the first nozzle bank that emitted the at least some of the first dots;

(c) determining a placement error for the at least some of the second dots; and

(d) adjusting alignment of the second nozzle bank in accordance with any errors determined in placement, wherein steps (a) and (b) and (c) are repeated at different spacings of the nozzle banks to different receiver media.

15. (Cancel)

16. (Original) The method of ~~claim 15~~ claim 7 and wherein error is determined based on information about which nozzle printed which dot on which pass.

17. (Cancel)

18. (Original) The method of ~~claim 17~~ claim 40 and wherein in step (c) a scanner scans the receiver medium at a location separate from a carriage on the printer apparatus.

Claims 19-23 (Cancel)

24. (Currently Amended) A calibration method of ~~ef~~ aligning the printing of dots generated by different nozzle banks of an ink jet printer apparatus, the method comprising the steps of:

(a) printing on a receiver medium a sequence of spaced discrete first dots of a first color from one nozzle bank having plural nozzles associated therewith, the first dots being printed in a predetermined pattern;

(b) printing on the receiver medium a sequence of spaced discrete second dots of a second color from a second nozzle bank having plural nozzles associated therewith, at least some of the second dots being printed within the pattern;

(c) generating through examination of the receiver medium or a reproduction thereof color information regarding the dots printed on the receiver medium;

(d) using the color information to identify locations of the second dots;

(e) determining placement errors for the at least some of the second dots; and

(f) adjusting alignment of the second nozzle bank in accordance with any errors determined in placement wherein the placement error is examined for possible error in rotation position of the second nozzle bank.

25. (Previously Presented) The method of claim 24 and wherein the rotation position of the second nozzle bank is determined relative to a predetermined relational point of rotation of the second nozzle bank.

26. (Currently Amended) The method of ~~claim 17~~ claim 40 and wherein adjustments to the alignment of the second nozzle bank is made automatically in response to determining the placement error.

Claims 27-29 (Cancel)

30. (Previously Presented) A method of aligning the recording of pixels by different recording element banks of a printer apparatus comprising the steps of:

printing on a recording medium a predetermined pattern of discrete spaced pixels by plural recording elements of each of at least first and second banks, each discrete pixel being printed by a single one of the recording elements;

removing the recording medium from the printer apparatus;

examining the recording medium or a reproduction thereof at a resolution of at least 500 DPI to derive electronic information relative to the location of pixels in the printed pattern;

processing the information to determine respective centers of the spaced pixels;

determining errors in location of the determined centers of the spaced pixels from where the centers should be if the banks were properly aligned;

determining needed adjustments of a bank or banks or recording elements in the bank or banks to improve alignment of the pixel recording by such bank or banks or recording elements in the bank or banks ; and

adjusting alignment of pixel recording by at least one bank or at least some of the recording elements therein in accordance with a determination of needed adjustments wherein in the step of determining needed adjustment of a bank or recording elements therein a signal is provided related to a need for a rotational adjustment of the bank.

31. (Previously Presented) A method of aligning the recording of pixels by different recording element banks of a printer apparatus comprising the steps of:

printing on a recording medium a predetermined pattern of discrete spaced pixels by plural recording elements of each of at least first and second banks, each discrete pixel being printed by a single one of the recording elements;

removing the recording medium from the printer apparatus;

examining the recording medium or a reproduction thereof at a resolution of at least 500 DPI to derive electronic information relative to the location of

pixels in the printed pattern;

processing the information to determine respective centers of the spaced pixels;

determining errors in location of the determined centers of the spaced pixels from where the centers should be if the banks were properly aligned;

determining needed adjustments of a bank or banks or recording elements in the bank or banks to improve alignment of the pixel recording by such bank or banks or recording elements in the bank or banks ; and

adjusting alignment of pixel recording by at least one bank or at least some of the recording elements therein in accordance with a determination of needed adjustments wherein in the step of adjusting alignment of pixel recording by at least one bank or at least some of the recording elements therein alignment adjustment is made by pivoting the bank.

Claims 32 and 33

34. (Currently Amended) The method according to ~~claim 33~~ claim 40 and wherein at least some of second dots printed within a pattern on the recording medium and printed by respective second nozzles in a second nozzle bank are closer to first dots in the pattern and printed by respective first nozzles on the first nozzle bank than the respective nozzle spacings between the second nozzles and the first nozzles.

35. (Currently Amended) The method according to ~~claim 29~~ claim 40 and wherein adjustment of alignment of a bank is made by providing information relative to timing of actuations of recording elements that corrects for alignment error of a bank.

36. (Currently Amended) The method according to ~~claim 29~~ claim 40 and wherein the pixels are scanned by a color scanner to determine pixels of different colors.

37. (Canceled)

38. (Cancel)

39. (Currently Amended) The method of ~~claim 38~~ claim 40 and wherein in step (f) different adjustments of timing of actuations of a nozzle in the second nozzle bank are provided for different drop sizes emitted by that nozzle to correct for alignment errors in the second nozzle bank.

40. (Previously Presented) A calibration method of aligning the printing of dots by different nozzle banks of an ink jet printer apparatus, the method comprising the steps of:

(a) printing on a receiver medium a sequence of spaced discrete first dots from one nozzle bank having plural nozzles associated therewith, the first dots being printed in a predetermined pattern;

(b) printing on the receiver medium a sequence of spaced discrete second dots from a second nozzle bank having plural nozzles associated therewith, at least some of the second dots being printed within the pattern;

(c) generating through examination of the receiver medium or a reproduction thereof information regarding the dots printed on the receiver medium;

(d) using the information to identify locations of the second dots;

(e) determining placement errors for the at least some of the second dots; and

(f) adjusting alignment of the second nozzle bank in accordance with any errors determined in placement wherein in step (c) the receiver medium is scanned at a resolution of at least five times the diameter of the smallest dot printed thereon.

41. (Original) The method of claim 40 and wherein the first dots are printed in a different color from the second dots.

42. (Currently Amended) The method of ~~claim 17~~ claim 40 and wherein in step (d) locations of centroids of dots are determined.

43. (Cancel)

44. (Currently Amended) The method of ~~claim 17~~ claim 40 and wherein the first nozzle bank defines reference dot positions of dots printed during a single pass.

45. (Canceled)

Claims 46-50. (Cancel)

51. (Currently Amended) The method of ~~claim 1~~ claim 40 and wherein the first and second nozzle banks emit ink of the same color and both of the first and second nozzle banks are supported on a carriage for movement in the fast scan direction and the first and second nozzle banks are separated in the fast scan direction by additional nozzle banks that emit inks of different colors than said same color.